XMT® Series

Issued October 2001 • Index No. DC/18.8

Multiprocess Welding Power Source

Quick Specs

Heavy Industrial Applications
Construction
Shipbuilding
Railroad
Truck and Trailer Manufacturing
Fabrication
Repair Shops
Rental Fleets

Processes
MIG (GMAW)/Pulsed MIG (GMAW-P)
Stick (SMAW)
TIG (GTAW)/Pulsed TIG (GTAW-P)
Flux Cored (FCAW)
Air Carbon Arc (CAC-A)
Cutting and Gouging

Input Power **304:** Requires 3- or 1-Phase Power
456: Requires 3-Phase Power

Output Power Range **304:** 10–35 V, 5–400 A (3-Phase)
10–35 V, 5–400 A (1-Phase)
456: 10–38 V, 5–600 A (3-Phase)

Weight **304:** Net: 76 lb (34.5 kg) Ship: 85 lb (38.6 kg)
456: Net: 118 lb (53.5 kg) Ship: 129 lb (58.5 kg)

The Power of Blue®

New! **XMT 304 MIGRunner™ power-efficient package** comes complete in one box. See page 7 for details.

Wind Tunnel Technology™ protects electrical components and PC boards from contamination.

Fan-On-Demand™ cooling system operates only when needed, reducing noise, energy use and the amount of contaminants pulled through machine.

Lift-Arc™ allows TIG starting without the use of high-frequency. Starts the arc without contaminating the weld with tungsten.

Adaptive Hot Start™ increases the output amperage at the start of a weld if necessary, eliminating electrode sticking.

Inverter arc control technology provides greater puddle control for superior 6010 Stick electrode performance.

Line voltage compensation keeps power constant even if power input varies by ±10%.

XMT 304

XMT 456 CC/CV

Process selector switch reduces the number of control setup combinations without reducing any features.

Large, dual digital meters are easy to view and are presettable to ease setting weld output.

Pulsed MIG capabilities reduces spatter and distortion, allows better out-of-position puddle control, and provides potential reduction of fume particle emission.

XMT 456 CC/CV only

Primary voltage display shows what primary voltage the power source is set for without removing the side panels. Saves time and assures you that the power source has been correctly set for available input voltage.

Unique case design helps protect internal components from dirt and dust. To connect input power cord and/or set unit up for correct input power, remove the easy-to-handle panel (1/3 case). The remaining two-thirds of the case never needs to be removed!

Optional remote on/off provides ability to turn power source on or off when it is located away from your work.

Lightweight, **aerospace-grade aluminum case** offers protection with the benefit of reduced weight.

115 VAC auxiliary power (optional on XMT 304) provides 10 amps of circuit-breaker-protected power for water circulators, etc.

XMT 304 only

Auto-Link® circuit automatically links the power source to primary voltage being applied (230/460 or 460/575 VAC, single- or three-phase).

Ultra-tough, polycarbonate-blended cover for control panel protects front controls from damage.

International-style weld disconnects provide high-quality weld cable connections. (Two connectors supplied with each unit.)

TRUE BLUE® 3YR. WARRANTY

Power source is warranted for 3 years, parts and labor.
Original main power rectified parts are warranted for 5 years.

MADE IN USA
APPLETON, WI

Miller® The Power of Blue.

Miller Electric Mfg. Co.
An Illinois Tool Works Company
1635 West Spencer Street
Appleton, WI 54914 USA

International Headquarters
Phone: 920-735-4505
USA FAX: 920-735-4134
Canadian FAX: 920-735-4169
International FAX: 920-735-4125

Web Site
www.MillerWelds.com

ISO 9001 REGISTERED QUALITY SYSTEM

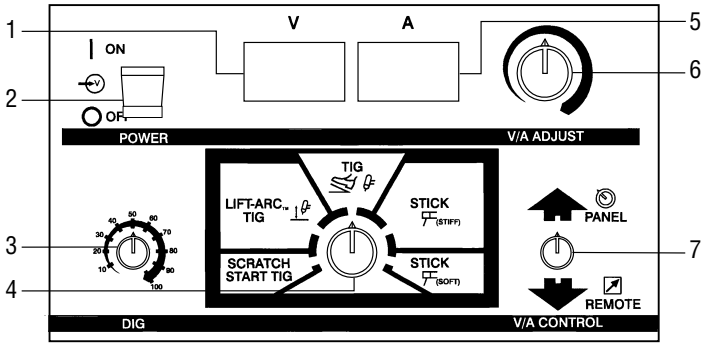
XMT® 304 Specifications (Subject to change without notice.)

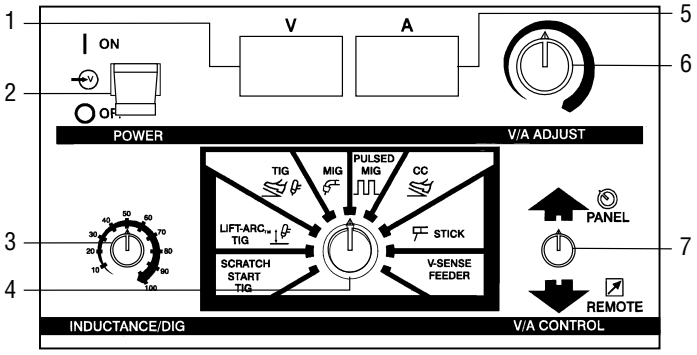
CC or CC/CV DC 3 Phase 1 Phase

Model	Input Power	Rated Output at 60% Duty Cycle	Voltage Range in CV Mode	Amperage Range in CC Mode	Max. Open-Circuit Voltage	Amps Input at Rated Load Output, 60 Hz, 208 V	230 V	400 V	460 V	575 V	KVA	KW	Dimensions	Weight
XMT 304 CC	Three-Phase	300 A at 32 VDC	—	5–400 A	90 VDC	33.7	30.5	17	18.9	15.2	12.2	11.6	H: 17 in (432 mm) W: 12-1/2 in (318 mm) D: 24 in (610 mm)	Net: 76 lb (34.5 kg) Ship: 85 lb (38.6 kg)
	Single-Phase	225 A at 29 VDC	—	5–400 A	90 VDC	52.4	47.4	–	24.5	–	11.3	7.6		
XMT 304 CC/CV	Three-Phase	300 A at 32 VDC	10–35 V	5–400 A	90 VDC	33.7	30.5	17	18.9	15.2	12.2	11.6		
	Single-Phase	225 A at 29 VDC	10–35 V	5–400 A	90 VDC	52.4	47.4	–	24.5	–	11.3	7.6		

Certified by Canadian Standards Association and Listed by Underwriters' Laboratories.

XMT® 304 Control Panels





XMT 304 CC Model

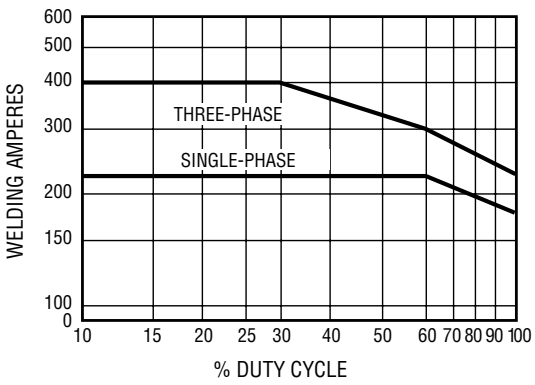
1. Voltmeter
2. Power On/Off Switch
3. Dig Control
4. Process Selector Switch (Rotary Switch)
5. Ammeter
6. Amperage Adjustment Control
7. Amperage Control Switch

XMT 304 CC/CV Model

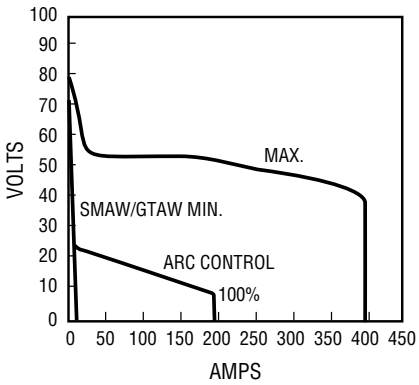
1. Voltmeter
2. Power On/Off Switch
3. Inductance/Dig Control
4. Process Selector Switch (Rotary Switch)
5. Ammeter
6. Voltage/Amperage Adjustment Control
7. Voltage/Amperage Control Switch

XMT® 304 Performance Data

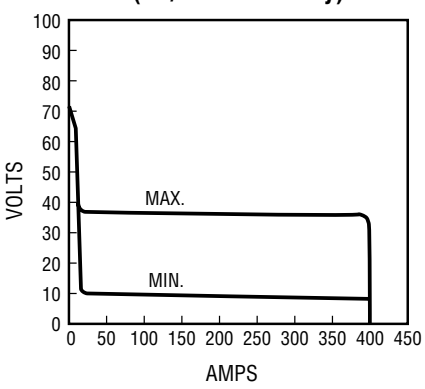
DUTY CYCLE CHART



CC VOLT/AMP CURVE



CV VOLT/AMP CURVE (CC/CV Model only)



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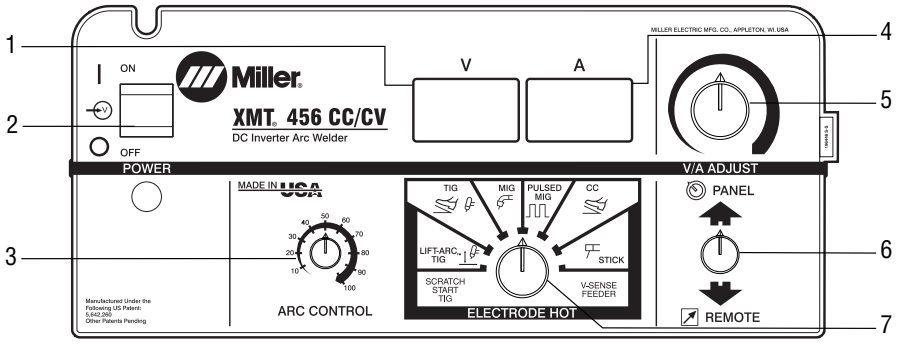
XMT® 456 CC/CV Specifications (Subject to change without notice.)

Input Power	Rated Output	Voltage Range in CV Mode	Amperage Range in CC Mode	Max. Open-Circuit Voltage	Amps Input at Rated Load Output, 60 Hz 230 V	400 V	460 V	575 V	KVA	KW	Dimensions	Weight
Three-Phase	450 A at 38 VDC, 100% Duty Cycle 565 A at 43 VDC, 60% Duty Cycle	10–38 V	5–600 A	95 VDC	50.8	31	27.8	24.4	21.2	19.2	H: 17 in (432 mm) W: 14-1/2 in (368 mm) D: 26 in (660 mm)	Net: 118 lb (53.5 kg) Ship: 129 lb (58.5 kg)

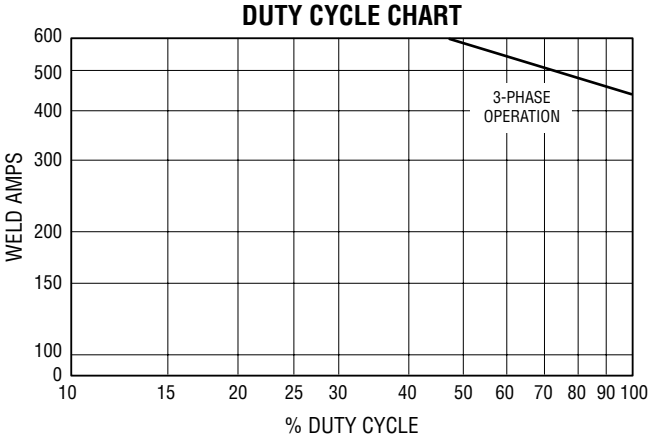
XMT® 456 CC/CV Control Panel

1. Voltmeter
2. Power On/Off Switch
3. Arc Control
4. Ammeter
5. Voltage/Amperage Adjustment Control
6. Voltage/Amperage Control Switch
7. Process Selector Switch (Rotary Switch)

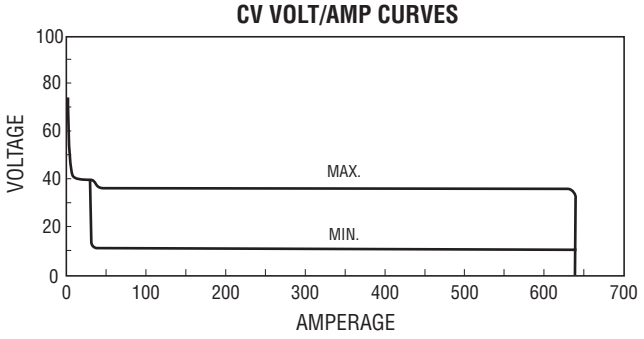


XMT® 456 CC/CV Performance Data

DUTY CYCLE CHART

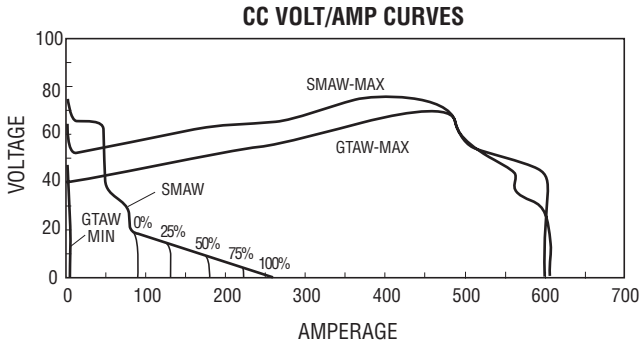


CV VOLT/AMP CURVES



Volt/amp curves show minimum and maximum voltage and amperage output capabilities of unit. Curves of other settings fall between curves shown.

CC VOLT/AMP CURVES



Genuine Miller Accessories

Note: For best performance, do not run the XMT on 200 or 208 primary voltage when using the following control options.

For All CC/CV Models Only

WC-24 Weld Control #137 549
Packaged in a compact, lightweight, non-metallic enclosure, the WC-24 easily mounts directly on the power source. It's designed for use with Miller CV power sources supplying 24 VAC and 14-pin receptacles. The control includes a board-mounted potentiometer which can alter the drive motor acceleration rate to optimize arc starting performance. For use with Spoolmatic 30A spool gun.

WC-115A Weld Control #137 546
This control operates on 115 VAC, and is designed primarily for CC DC power sources. It can also be used with CV power sources or DC engine drives supplying 115 VAC. When used with a CC source, the control circuit functions in a voltage-sensing mode. When used with a CV source, it functions as a constant-speed circuit.

Standard features include a wire run-in control and a drive motor acceleration control which ensure optimum arc starting performance, regardless of the type of power source being used. The WC-115A comes with a 10 ft (3 m), wall-type plug power cord, and a 14-pin contactor cord.

Optima™ #043 389
A multipurpose, microprocessor-based pulse control for both synergic MIG (wire welding or GMAW) or manual MIG pulsing. Use this control with the XMT 304 CC/CV power source and any Miller wire feeder, including automatic feeders and spool guns. Includes a 25 ft (7.6 m) cord with 14-pin plug. Features of the control include:

- Manual MIG pulse mode allowing operator to individually control peak amperage, background amperage, pulses per second and pulse width
- Synergic MIG pulse mode provides synergic pulse spray programs
- Pulse spray transfer eliminates spatter associated with the short circuit or globular transfer process
- Both adaptive and non-adaptive pulsing modes for a wide range of applications
- Standard MIG (GMAW) mode for non-pulsed applications
- Microprocessor-based technology for easy setup
- Convenient digital readout for better repeatability. Readout displays program number, pulse mode (adaptive or non-adaptive), arc length (0–100) and volts (for MIG only).
- Voltage-sensing leads are not required, resulting in less cord clutter
- Includes a 25 ft (7.6 m) cord with 14-pin plug
- For best pulsing performance, use 4/0 weld cable and no more than 50 ft (15.2 m) of total cable

Extension Cords for Optima
#043 725 25 ft (7.6 m)
#043 726 50 ft (15.2 m)
#043 727 75 ft (22.9 m)

For All Models

PC-300 Pulsed TIG (DC GTAW) Control #042 297
Can be used with power sources that have built-in high frequency, or it can be used with an external high-frequency unit. The control has two internally switchable scales: a 0.5–20 pulses-per-second scale for both inverter and non-inverter type power sources, and a 10–300 pulses-per-second scale for inverter power sources only. Control includes 8 ft (2.4 m) interconnecting cord and 115 VAC power cord. Front panel controls provide:

- Peak amperage adjustment
- Background amperage adjustment
- Pulses-per-second adjustment (0.5–20 pulses-per-second scale or 10–300 pulses-per-second scale)
- Percent-on-time control
- Amperage remote/panel control
- Output contactor on/off control
- Pulser on/off
- Power on/off
- Remote control receptacle (for remote hand or foot controls)

HF-251D-1 High-Frequency Arc Starter and Stabilizer #042 388
A portable 115 volt, 250 amp unit. Requires Secondary Contactor.

Intellitig™ 4 Precision TIG Controller #042 598
Provides high-frequency arc starting, timed gas solenoid control and metering, pulsing, sequencing, sloping, on-screen voltage and amperage metering, and two relay contacts for fixturing. The control provides four modes of operation: Automatic, Semiautomatic, Manual GTAW and SMAW. For detailed information, refer to Lit. Index No. AY/9.0.

Genuine Miller Accessories (continued)

Remote Controls

RFCS-14 Foot Control #043 554
Heavy-duty foot current and contactor control. Includes 20 ft (6 m) cord and 14-pin plug.

RHC-14 Hand Control #129 340
Miniature hand control for remote current and contactor control. Dimensions: 4 x 4 x 3-1/4 in (102 x 102 x 82 mm). Includes 20 ft (6 m) cord and 14-pin plug.

RMLS-14 #129 337 14-pin plug
Momentary- and maintained-contact rocker switch for contactor control. Push forward for maintained contact and back for momentary contact. Includes 20 ft (6 m) cord.

RCC-14 Remote Contactor and Current Control #151 086 14-pin plug
Rotary-motion fingertip control fastens to TIG torch using two Velcro® straps. Includes 28 ft (8.5 m) control cord.

RCCS-14 Remote Contactor and Current Control #043 688
Up-and-down rotary-motion fingertip control. Great for applications that require a finer amperage control. Includes 28 ft (8.5 m) control cord.

Extension Cords for Remote Controls and 24 VAC Wire Feeders
#122 973 25 ft (7.6 m)
#122 974 50 ft (15.2 m)
#122 975 75 ft (22.8 m)
14-pin plug to 14-pin socket.
Note: Not for use with Optima or 60M Series.

Running Gear

MIGRunner™ Cart #195 445
Small footprint and easily maneuverable, with cylinder rack low enough that you do not have to lift bottles. Durable, heavy-duty ergonomic handles are designed for comfort.

XMT Cylinder Cart #042 537
Has adjustable handles and is slanted for convenient access to power source front panel controls. Carries two 160 lb (72.6 kg) gas cylinders, or one gas cylinder and one coolant system for TIG (GTAW) welding. Feeder mounted to tray above power source. Can be used with the Maxtron™, Miller Arc Pak™ or XMT inverter power supplies. Also accommodates Radiator, Watermate™, or Coolmate™ coolant systems.

Universal Carrying Cart and Cylinder Rack #042 934
Accommodates any XMT power source, plus gas cylinder up to 56 in (142.2 cm) high measuring 6 to 9 in (15.2 to 22.8 cm) in diameter. Also provides storage for auxiliary items such as electrodes, helmets, gloves, etc. Can also be used with Econotig™, Maxstar® Series, Millermatic® 130XP and Millermatic® 150 power sources.

Inverter Racks

Four or Six-Arc Welding System

The Inverter Rack conveniently houses multiple XMT power sources for multiple welders. Both 4-rack and 6-rack models are available. Features include:

- Provision to parallel power sources or common work connections
- Two lifting eyes for transportation
- Rugged skids for dragging or pushing

For additional information on customized Inverter Rack systems see Lit. Index No. DC/18.81.

Water Coolant Systems

For more information, see the Miller Coolant Systems literature sheet, Index No. AY/7.2.

Coolmate™ 3
#043 007 115 VAC
#043 008 230 VAC
For use with water-cooled torches rated up to 600 amps. Unique paddle-wheel indicator, external filter and easy-fill spout.

Coolmate™ V3 #043 009 115 VAC
For use with water-cooled torches rated up to 500 amps. Vertical design conveniently mounts to Miller cylinder rack in place of one cylinder.

Coolmate™ 4 #042 288 115 VAC
For use with water-cooled torches rated up to 600 amps. Tough molded polyethylene case with carrying handle.

Coolant #043 810
Sold in cases of four 1-gallon recyclable plastic bottles. Miller coolants contain a base of ethylene glycol and deionized water to protect against freezing to -37˚F (-38˚C) or boiling to 227˚F (108˚C). Also contains a compound that resists algae growth.

Wire Feeders

Spoolmatic® 30A #130 831
A 1-lb, air-cooled spool gun that extends the weld process range by adding a handy portable system for small wire MIG. Rated 200 A at 100% duty cycle. Includes 30 ft (9.1 m) cable assembly. (WC-24 #137 549 for 14 pin.)

S-22P12 Wire Feeder #125 616
Compact, lightweight 24 VAC constant-speed semi-automatic wire feeder provides portability in outdoor environments. Primarily designed for gas-shielded wires. Accommodates up to a 30 lb (13.6 kg), 12 in (304 mm) diameter spool. See Lit. Index No. M/6.3.

22A Wire Feeder #193 006
Simple, Reliable, 24 VAC constant-speed semiautomatic wire feeder, best suited for small diameter wires. Accommodates up to a 60 lb (27.2 kg) spool of welding wire when using optional wire reel assembly. See Lit. Index No. M/11.0.

XR Control #181 538
Push-pull wire feed system offers unparalleled performance for aluminum MIG welding.See Lit. Index No. M/1.7.

Super S-32P Wire Feeder #159 928
A compact, portable, voltage-sensing wire feeder for .023–5/64 in (0.6–2.0 mm) flux cored wire. See Lit. Index No. M/6.3.

60M Series
S-60M #131 794
D-60M #131 796
See Lit. Index No. M/2.4.

714-D #194 824
Wire feeder features process and weld control and handles a variety of wires up to 1/8 in. See Lit. Index No. M/3.0.

SuitCase 8VS™ #194 890
Lightweight, portable wire feeder for a variety of wires up to .062 in. Holds up to an 8 in spool of wire. See Lit. Index No. M/6.4.

Process Selector Control #042 872
This control is designed for use with dual wire feeders, applications where electrical isolation and/or polarity reversing of weld current is required, and for easy welding process changes.

Includes 115 VAC, 2 amp receptacle, two 14-pin receptacles and a 10 ft (3 m) 14-pin cord.

International-Style Connectors (Will accept Dinse™ or other International connectors.)

Note: All XMT 304 power sources are equipped with International-style connectors for secondary connections. (Power source is shipped with two 50-mm male International-style plugs for use with #1 or #2 AWG size cable.)

International-Style Connector Kit

#042 418 50 mm
Accepts #1 or #2 AWG cable size. Required if male plugs shipped with power source must be replaced, if additional plugs are needed.

#042 533 70 mm
Accepts #1/0 or #2/0 AWG cable size. Required if #1/0 or #2/0 AWG size cable is to be used.

Kit includes one International-style male plug which attaches to the work and/or weld cables and plugs into the International-style receptacles on the power source.

Extension Kit for International-Style Cable Connectors

#042 419 50 mm
Accepts #1 or #2 AWG size cable.

#042 534 70 mm
Accepts #1/0 or #2/0 AWG size cable.

Used to adapt or extend weld and/or work cables. Kit includes one male International-style plug and one in-line female International-style receptacle.

International/Tweco® Adapter #042 465
A one-piece adapter which has an International-style male plug (to power source) on one end and a female Tweco receptacle (for weld cable connection) on other end.

International/Cam-Lok Adapter #042 466
A one-piece adapter which has an International-style male plug (to power source) on one end and a Cam-Lok receptacle (for weld cable connection) on other end.

XMT 304 MIGRunner™ Components

New! **XMT® 304 MIGRunner™ #907 061**

Comes Complete With:
- XMT 304 power source
- 22A wire feeder
- Roughneck™ C-4015 gun
- Consumable kit
- .035 and .045 in drive roll kit
- Regulator/flow gauge with gas hose
- ***NEW!*** MIGRunner Cart with cylinder rack

Ordering Information

Equipment and Options	Stock No.	Description	Qty.	Price
Power Source				
XMT® 304 CC	**#903 474**	208-230/460 VAC with Auto-Link®		
XMT® 304 CC/CV	**#903 471** **#903 471-01-1** **#903 647** **#903 473** **#903 472** **#903 522**	208-230/460 VAC with Auto-Link® 208-230/460 VAC with Auto-Link® and Aux. Power 460 with **CE** 460/575 VAC with Auto-Link® 400 VAC, 50/60 Hz with Aux. Power and **CE** 400 VAC, 50/60 Hz		
XMT® 304 MIGRunner™	**#907 061**	208-230/460 VAC with Auto-Link®. See page 7 for package components		
XMT® 456 CC/CV	**#907 010** **#907 010-01-1** **#907 011** **#907 012**	230/460 VAC 230/460 VAC with Remote On/Off 575 VAC 400 VAC with **CE**		
Inverter Racks (full or empty)		See Lit. Index No. DC/18.81		
Wire Feeders				
Spoolmatic® 30A Spool Gun	**#130 831**	Includes 30 ft (9.1 m) cable assembly		
S-22P12 Wire Feeder	**#125 616**	See Lit. Index No. M/6.3		
22A Wire Feeder	**#193 006**	See Lit. Index No. M/11.0		
XR Control	**#181 538**	See Lit. Index No. M/1.7		
Super S-32P Wire Feeder	**#159 928**	See Lit. Index No. M/6.3		
60M Series	**#131 794** **#131 796**	S-60M. See Lit. Index No. M/2.4 D-60M. See Lit. Index No. M/2.4		
714-D	**#194 824**	See Lit. Index No. M/3.0		
SuitCase 8VS™	**#194 890**	See Lit. Index No. M/2.4		
Guns				
Roughneck C-Series		See Lit. Index No. AY/17.0		
Gun Liners		See Lit. Index No. AY/17.0		
Contact Tips		See Lit. Index No. AY/17.0		
MIG Accessories				
Optima™ MIG Pulse Control	**#043 389**	For XMT 304 and 456 CC/CV models only		
Optima™ Extension Cords	**#043 725** **#043 726** **#043 727**	25 ft (7.6 m) 50 ft (15.2 m) 75 ft (22.9 m)		
WC-24	**#137 549**	For use with Spoolmatic 30A		
WC-115A	**#137 546**	For use with XMT 304 CC/CV		
Process Selector Control	**#042 872**			
Power Source Data Cards	**#043 390** **#043 391**	For use with 64M feeder For use with XR-M feeder		
TIG Accessories				
PC-300 Pulsed DC TIG Control	**#042 297**			
Intellitig™ 4 Precision TIG Controller	**#042 598**	See Lit. Index No. AY/9.0		
HF-251D-1 HF Starter/Stabilizer	**#042 388**	See Lit. Index No. AY/5.1		
RFCS-14	**#043 554**	Foot control		
RHC-14	**#129 340**	Hand control		
RMLS-14	**#129 337**	Rocker switch		
RCC-14	**#151 086**	Fingertip control		
RCCS-14	**#043 688**	Fingertip control		
Accessories				
Extension Cords (For 24 VAC wire feeders and remote controls. Not to be used with Optima, 60M or XR-M)	**#122 973** **#122 974** **#122 975**	25 ft (7.6 m) 50 ft (15.2 m) 75 ft (22.8m)		
Extension Cords (115 VAC)	**#043 725** **#043 726**	25 ft (7.6 m) 50 ft (15.2 m)		
MIGRunner™ Cart	**#195 445**			

Date: **Total Quoted Price:**

Distributed by:

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The Power of Blue.

Litho in USA